

CALIFORNIA STATE BOARD OF HEALTH

Weekly



Bulletin

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EDITOR

TYPHOID AND WATER SUPPLY.

By C. E. A. WINSLOW, Professor of Public Health, Yale School of Medicine.

In the old days of rural New England, typhoid was generally known as "Fall fever." In most communities this disease still shows a maximum between August and October, because prevalence of flies, exposure to insanitary conditions on vacation and increased consumption of uncooked foods and drinks all tend to favor its spread by direct contact at this season. Where public water supplies are not properly protected, however, we find a more widespread and devastating prevalence of "winter typhoid;" for it is the heavy rains and melting snows of November and December or March and April which are apt to wash infective material into a reservoir.

This is what happened at Plymouth, Pa., in April, 1885, when the discharges from a single patient sowed the seed for 1100 cases of typhoid in a total population of only 8000 persons. It is what happened only last October at Akron, N. Y., where failure properly to operate a purification plant caused over 200 cases of typhoid in a village of only 2000 inhabitants. One out of every ten persons in a whole community sick at a given time from a preventable disease!

For of course water-borne typhoid fever is absolutely preventable and therefore absolutely inexcusable. City water supplies can be rendered safe by one of three different treatments—by storage and chlori-

nation, by slow sand filtration and by so-called rapid mechanical filtration. Either storage or chlorination alone could in theory be used for treatment, since disease germs die out rapidly in water and can be destroyed by chlorine. In practice, however, it is dangerous to rely on storage alone since local wind currents may carry pollution rather quickly across even a large reservoir while chlorine alone is not adapted for treating a water of variable composition such as that of a running stream. The combination of storage and chlorination is however an admirable method for the treatment of many waters. For others which are more highly polluted slow filtration through sand beds (often again supplemented by chlorination) will serve; and for turbid waters from regions having a clay soil rapid mechanical filtration (with the use of alum as a coagulant and often again followed by chlorination) is the best procedure.

By one or the other of these methods every community can assure itself of an absolutely safe public water supply and at a very moderate cost. For the small village using a naturally stored supply the essential safeguard of chlorination can be secured at a price of less than ten cents per person per year.

For those who are unfortunate enough to live in communities where the water supply is not thus protected safety can be assured by boiling the water before use for drinking.

Similarly, in all communities milk should be boiled or pasteurized (either commercially or in the home) for there is no safe "raw" milk any more than there is any safe untreated water. Finally, for those who live or travel in regions where sanitation is still primitive there is the possibility of preventive immunization by the use of anti-typhoid vaccine, a process which repeated every two years will in the vast majority of instances protect against infection with this disease.

Of the 77 large cities in the United States, 30 had typhoid rates below 2 per 100,000 in 1925 while only 2 cities had rates over 20. Fifteen years ago, out of a similar group of 51 cities not one had a rate below 2 and 17 had rates over 20. This marvelous result has been attained by the measures outlined above—by the purification of water supplies, the pasteurization of milk supplies and the use of typhoid vaccine. Yet there are still 6000 deaths from this disease in the United States each year and this is 6000 deaths too many.



Human life holds no greater joy in youth or later, than the possession of a strong, healthy body, and the ability to excel in sport because of that physical perfection, yet like many other blessings, this is not always appreciated until it is too late.



Mexico Issues Excellent Report.

The first quarterly official bulletin of the Department of Health of the Republic of Mexico for the present year indicates that a vast amount of public health work is now under accomplishment in our neighboring republic. The departments of sanitary engineering, transmissible diseases, tropical diseases, public baths and fumigation, venereal diseases, anti-rabic institute, tuberculosis, child hygiene, institute of hygiene and others are all actively engaged in safeguarding the health of the republic. Malaria control and venereal disease control occupy important positions in the Mexican health program. A school of health is conducted for public health workers who are given diplomas upon completing the required courses. The new health code for the whole republic is to be administered by local health officers. An intensive course in public health, covering two months, is given to physicians. Radio health talks, lectures and conferences are regularly made a part of the educational program.

Keep Watch For Typhoid Carriers.

Approximately 2500 persons in Montreal, Canada, have suffered from typhoid fever since early in March. This epidemic, which is now under control, is said by Canadian health authorities, to have its source in a typhoid carrier in the person of a foreman of a large milk pasteurizing plant in Montreal. It is to be expected that there will be a considerable number of typhoid carriers in persons who have contracted the disease in this outbreak, many of whom may visit the United States during the vacation season. Some will probably seek employment in summer resorts, hotels, recreation camps as food handlers and in related lines of employment. It has been suggested by the United States Public Health Service that employers of food handlers, health officers and resort owners should exercise unusual care with regard to the sanitation and examination of food handlers in order that disastrous outbreaks of typhoid fever may be averted.

It is urged that local health authorities in communities which receive summer visitors be alert to the necessity of establishing sanitary conditions and maintaining them on a high plane throughout the season. Sanitary methods of sewage disposal, adequate protection of water and milk supplies, and bacteriological examinations of food handlers are of paramount importance.

It is recommended that health officers immediately inform local governmental officials and citizens of the importance of adequate public health protection under existing conditions and secure whatever funds may be necessary for the support and maintenance of adequate local health measures. Failure to present this matter at the present time is liable to result in sickness and loss of life among summer visitors and in heavy financial losses to local citizens. It is believed that the people of this country will be reassured by statements as to the sanitary safeguards which have been afforded for their protection and that knowledge of such measures will be of definite advantage to communities and resorts which let the public know that precautions have been taken.

Typhoid vaccination is considered of importance as an individual means of protection for persons who are necessarily exposed to insanitary conditions, or who are to travel in places where sanitary conditions are questionable or unknown.

Finding Heart Disease In Children.

The following comment upon the search for heart lesions in children is of interest to all who are engaged in child hygiene work. Dr. Charles K. Stulik of Chicago, the author, has been engaged, together with eight specialists, in making a comprehensive survey of cardiac diseases in children.

"Heart lesions are diagnosed in our children at an earlier date by considering those with rheumatism, chorea and frequent sore throat as potential cardiacs, and by giving them frequent examinations. Children, who fatigue easily, who complain of "growing pains" or other vague pains, and children, who are "nervous" should have the advantage of a complete examination to rule out cardiac disease. Our propaganda for the education of parents must have as its goal the repeated examination of children throughout the preschool and the school age. In this way only can the neglected heart lesion be eliminated.

Watching children with chronic heart lesions over long periods leads one to the conclusion that the progress of the lesion is most rapid in those children, who do not have the benefit of eradication of foci in the teeth, naso-pharynx, middle ear, gastro-intestinal and genito-urinary tracts. If to these measures are added protection against over-exertion, chilling and exposure we are on the road to limitation of the progression of chronic lesions.

Whenever the cardiacs develop a fever, even of low calibre, and on complete examination no reason for the fever can be found, cardiac infection must be considered, especially if any irregularity of rhythm is found in the electrocardiogram. By giving these cases advantage of rest and salicylate therapy the heart is protected from undue strain. Some of our children have made definite gains in weight, general resistance and mental attitude by exposure to graduated ultra-violet light."



It takes years to make up the span of human life. There are a few years of study, a few years of sport, many years of useful business activity, and in the sunset of life, a few years of satisfaction in reflecting upon the past, yet we daily risk losing all of these years through a moment's thoughtlessness. This in particular, is the question in connection with one's health which, if taken care of, affords much of our pleasure, but if abused may forever bar us from future usefulness and enjoyment.

Sewage Disposal Permits Pending.

The following applications for sewage disposal permit are pending before the State Board of Health, final action to be taken at the next regular meeting of the Board, June 4, 1927, State Building, San Francisco.

Dana Point (Orange County)—Application for permit, filed by the Title Insurance and Trust Company of Los Angeles, to construct Imhoff tank, discharging effluent into Pacific Ocean 1500 feet off shore.

Montebello—An application for permit to construct sewer system with disposal of sewage to Sanitation District No. 2 of Los Angeles County.

Pasadena—An application for permit to construct an additional clarifier at the city's activated sludge plant.

Weimar, Hospital Central Committee, Weimar Joint Sanitarium—An application for permit to construct a sprinkling filter plant with disposal into Wooley Creek.



MORBIDITY.*

Diphtheria.

113 cases of diphtheria have been reported, as follows: Alameda County 3, Berkeley 2, Oakland 10, El Cerrito 1, Richmond 2, Fresno County 1, Kern County 2, Kings County 2, Los Angeles County 17, El Segundo 1, Long Beach 4, Los Angeles 30, Manhattan Beach 1, Pasadena 2, Torrance 1, Ukiah 3, Orange County 1, Anaheim 1, Brea 1, Riverside County 1, Sacramento County 1, Sacramento 1, San Bernardino 1, San Diego County 1, San Diego 5, San Francisco 7, Tracy 1, San Mateo 1, Santa Barbara 3, Watsonville 1, Benicia 1, Sonoma County 1, Tulare County 2, Marysville 1.

Scarlet Fever.

161 cases of scarlet fever have been reported, as follows: Alameda County 1, Berkeley 5, Oakland 16, Piedmont 1, Chico 1, Pittsburg 1, Richmond 4, Fresno County 1, Fresno 2, Humboldt County 1, Kern County 4, Los Angeles County 17, Alhambra 1, Azusa 1, Glendale 2, Huntington Park 2, Long Beach 5, Los Angeles 34, Monrovia 1, Pasadena 6, Pomona 1, San Gabriel 1, Whittier 2, Madera 1, Monterey County 1, Orange County 3, Santa Ana 2, Riverside County 1, Sacramento 2, Colton 2, San Bernardino 1, San Diego 7, San Francisco 13, Stockton 2, San Mateo County 1, Los Gatos 1, Mountain View 2, San Jose 2, Petaluma 1, Modesto 1, Tulare County 5, Tuolumne County 2, Woodland 1.

Measles.

1638 cases of measles have been reported, as follows: Alameda County 4, Berkeley 8, Oakland 43, Piedmont 10, Pittsburg 8, Fresno County 14, Fresno 11, Kingsburg 2, Humboldt County 1, Imperial County 51, Calexico 2, Imperial 4, Kern County 10, Bakersfield 2, Hanford 4, Los Angeles County 188, Alhambra 47, Arcadia 1, Avalon 5, Azusa 4, Claremont 1, Compton 18, El Monte 6, El Segundo 4, Glendale 89, Hermosa Beach 3, Manhattan

*From reports received on May 23d and 24th, for week ending May 21st.

Beach 1, La Verne 1, Long Beach 10, Los Angeles 169, Monrovia 7, Pasadena 100, Pomona 22, Redondo Beach 4, San Fernando 7, San Gabriel 14, Sierra Madre 1, South Pasadena 11, Whittier 2, Torrance 1, Lynwood 2, Hawthorne 4, Monterey Park 9, Maywood 2, San Anselmo 2, San Rafael 1, Merced County 1, Merced 1, Monterey County 24, Carmel 3, King City 8, Grass Valley 1, Orange County 37, Anaheim 1, Brea 5, Fullerton 2, Newport Beach 5, Orange 19, Santa Ana 28, Seal Beach 3, Placer County 1, Riverside County 24, Banning 11, Riverside 36, San Jacinto 1, Sacramento 6, San Bernardino County 3, Colton 2, Ontario 19, San Diego County 46, Chula Vista 15, Coronado 23, San Diego 176, San Francisco 101, San Joaquin County 4, Manteca 3, Stockton 31, San Luis Obispo County 5, San Mateo County 1, Burlingame 16, San Bruno 1, San Mateo 12, Santa Barbara County 11, Santa Clara County 6, Palo Alto 10, San Jose 2, Sunnyvale 1, Watsonville 4, Benicia 1, Vallejo 1, Petaluma 1, Turlock 1, Tulare County 2, Visalia 3, Tuolumne County 4, Ventura 2, Yolo County 3, Marysville 1.

Whooping Cough.

245 cases of whooping cough have been reported, as follows: Berkeley 12, Oakland 60, Colusa 3, Pittsburg 5, Fresno County 2, Fresno 4, Lemoore 2, Los Angeles County 13, Alhambra 4, Glendale 2, Long Beach 5, Los Angeles 26, Monrovia 5, Lynwood 1, Orange County 4, Anaheim 1, Santa Ana 4, Riverside

County 2, Sacramento 4, San Bernardino 1, San Diego County 2, National City 1, San Diego 21, San Francisco 42, Stockton 9, San Luis Obispo 1, Santa Barbara County 1, Santa Clara County 1, Palo Alto 3, Solano County 1, Ventura 1, Yolo County 2.

Smallpox.

22 cases of smallpox have been reported, as follows: Oakland 5, Fresno 1, Sausalito 1, Orange 1, Riverside County 4, Sacramento County 1, Sacramento 6, San Francisco 1, Stockton 1, San Mateo 1.

Typhoid Fever.

Nine cases of typhoid fever have been reported, as follows: Oakland 1, Colusa County 1, Imperial County 1, Los Angeles County 1, Los Angeles 1, Pasadena 1, Napa County 1, Huntington Beach 1, San Francisco 1.

Meningitis (Epidemic).

Four cases of epidemic meningitis have been reported, as follows: Sacramento 1, San Francisco 2, Stockton 1.

Poliomyelitis.

Four cases of poliomyelitis have been reported, as follows: Berkeley 1, Los Angeles County 1, San Diego 2.

Encephalitis (Epidemic).

Santa Ana reported one case of epidemic encephalitis.

COMMUNICABLE DISEASE REPORTS.

| Disease | 1927 | | | 1926 | | | Reports for week ending May 22 received by May 25 | |
|-------------------------|-------------|-------|--------|---|-------------|-------|---|--|
| | Week ending | | | Reports for week ending May 21 received by May 24 | Week ending | | | |
| | April 30 | May 7 | May 14 | | May 1 | May 8 | | |
| Anthrax | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Botulism | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Chickenpox | 547 | 429 | 453 | 382 | 295 | 236 | 253 | |
| Diphtheria | 134 | 130 | 105 | 113 | 95 | 106 | 110 | |
| Dysentery (Bacillary) | 1 | 0 | 0 | 0 | 2 | 0 | 4 | |
| Encephalitis (Epidemic) | 3 | 3 | 0 | 1 | 0 | 1 | 2 | |
| Gonococcus Infection | 109 | 93 | 101 | 102 | 111 | 124 | 52 | |
| Influenza | 23 | 40 | 20 | 22 | 17 | 19 | 27 | |
| Jaundice | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Leprosy | 0 | 1 | 2 | 0 | 0 | 1 | 0 | |
| Malaria | 0 | 1 | 0 | 1 | 0 | 1 | 0 | |
| Measles | 2511 | 2212 | 1634 | 1638 | 404 | 468 | 509 | |
| Meningitis (Epidemic) | 11 | 4 | 4 | 4 | 3 | 3 | 2 | |
| Mumps | 307 | 259 | 228 | 278 | 346 | 293 | 327 | |
| Paratyphoid Fever | 0 | 1 | 1 | 1 | 0 | 0 | 2 | |
| Pneumonia (Lobar) | 63 | 55 | 28 | 45 | 33 | 38 | 38 | |
| Poliomyelitis | 1 | 4 | 5 | 4 | 5 | 1 | 2 | |
| Rabies (Animal) | 9 | 7 | 13 | 1 | 9 | 4 | 7 | |
| Rabies (Human) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rocky Mt. Spotted Fever | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Scarlet Fever | 205 | 189 | 220 | 161 | 126 | 130 | 149 | |
| Smallpox | 39 | 27 | 43 | 22 | 66 | 37 | 42 | |
| Syphilis | 135 | 189 | 96 | 91 | 117 | 187 | 71 | |
| Tetanus | 1 | 0 | 0 | 1 | 0 | 0 | 0 | |
| Trachoma | 39 | 3 | 9 | 1 | 2 | 4 | 2 | |
| Trichinosis | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Tuberculosis | 186 | 244 | 226 | 146 | 163 | 269 | 197 | |
| Typhoid Fever | 12 | 12 | 9 | 9 | 17 | 21 | 25 | |
| Typhus Fever | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Whooping Cough | 212 | 301 | 252 | 245 | 76 | 83 | 77 | |
| Totals | 4550 | 4204 | 3449 | 3268 | 1887 | 2026 | 1899 | |
| | | | | | | | 2005 | |

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